Supporting Information

Bottom-up Photonic Crystal Lasers

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Photonic-Crystal Cavity Arrays in PDMS:

The nanopillar photonic-crystal cavities are arranged in arrays with varying pitch and diameter in order to fine tune the resonant wavelength and *Q* factor. Each array contains 4 rows and 6 columns of devices. In each row, the radius is varied between 0.15·*a* and 0.2·*a* (where *a* is the inter-pillar pitch). In each column, the inter-pillar pitch is varied between 324 nm and 342 nm. This variation in pitch corresponds to resonant wavelengths between 950 nm and 1000 nm according to the normalized frequency calculated from FDTD simulations ($\lambda = a/\omega_n$, where $\omega_n = 0.342$). Fig. S2 shows a dark-field optical microscope image at 50× magnification of an array in PDMS with the inset showing a single device at 150× magnification. Additional rows for other experiments (labeled A) are visible but not reported on in this paper.

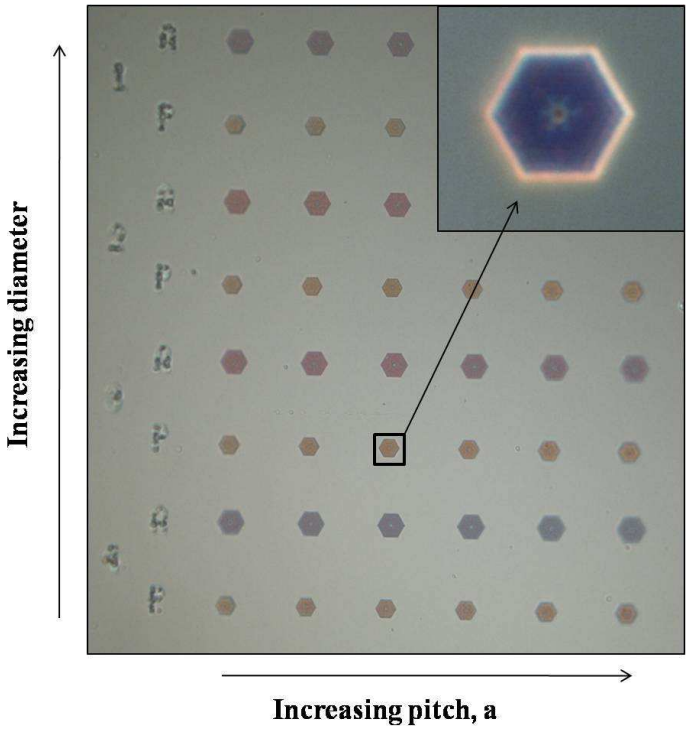

Figure S1